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1  (1)  GENERAL INFORMATION
2  (2)  INFORMATION FOR SEQ. ID NO.1:
3  (i)  SEQUENCE CHARACTERISTICS:
4  (A)  LENGTH: 5001 BASE - #PAIRS
5  (B)  TYPE: NUCLEIC ACID
6  (C)  STRANDEDNESS: SINGLE
7  (D)  TOPOLOGY: LINEAR
8  (ii) MOLECULE TYPE: GENOMIC DNA
9  (xi) SEQUENCE DESCRIPTION: SEQ. ID NO.1
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2 (2) INFORMATION FOR SEQ. ID NO.2:
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5 (B) TYPE: NUCLEIC ACID
6 (C) STRANDEDNESS: SINGLE
7 (D) TOPOLOGY: LINEAR
8 (ii) MOLECULE TYPE: GENOMIC DNA
9 (xi) SEQUENCE DESCRIPTION: SEQ. ID NO.2
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6 (C) STRANDEDNESS: SINGLE
7 (D) TOPOLOGY: LINEAR
8 (ii) MOLECULE TYPE: GENOMIC DNA
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1 (2) INFORMATION FOR SEQ. ID NO.4:
2 (i) SEQUENCE CHARACTERISTICS:
3 (A) LENGTH: 448 AMINO - #AMINO
4 (B) TYPE: AMINO ACID
5 (C) STRANDEDNESS: SINGLE
6 (D) TOPOLOGY: LINEAR
7 (ii) MOLECULE TYPE: ~~PROTIEN~~ PROTEIN
8 (xi) SEQUENCE DESCRIPTION: SEQ. ID NO.4
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2025-09-06 09:44:07

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2 (2) INFORMATION FOR SEQ. ID NO.5:
3 (i) SEQUENCE CHARACTERISTICS:
4 (A) LENGTH: 497 AMINO - #ACIDS
5 (B) TYPE: AMINO ACID
6 (C) STRANDEDNESS: SINGLE
7 (D) TOPOLOGY: LINEAR
8 (ii) MOLECULE TYPE: PROTEIN
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18 TPGPLAWDGGAGFTSEDGRGGITLRVAVANGLGNAKKLITKMQAGEAKYDFVEIMACFAG
19 CVGGGGQPRSTDKAITQKRQAALYNLDEKSTLRRSHENPSIRELYDTYLGEPLGHKAHEL
20 LHTHYVAGGVEEKDEKK
21

1
2 (2) INFORMATION FOR SEQ. ID NO.6:
3 (i) SEQUENCE CHARACTERISTICS:
4 (A) LENGTH: 436 AMINO - #ACIDS
5 (B) TYPE: AMINO ACID
6 (C) STRANDEDNESS: SINGLE
7 (D) TOPOLOGY: LINEAR
8 (ii) MOLECULE TYPE: PROTEIN
9 (xi) SEQUENCE DESCRIPTION: SEQ. ID NO.6
10
11
12 MCCPVVASRHAGRARHVAVRAAGPTSECDPPTPQAKLPHWQQALDELAKPKESRRLMIA
13 QIASAVRVAIAETIGLAPGDVTIGQLVTGLRMLGFDYVFDTLFGADLTIMEEGTELLHRL
14 QDHLEQHHPNKEEPLPMFTSCCPGWWAMVEKSNPELIPYLSSCKSPQMMLGAVIKNYAQQ
15 VGVQPSDICNVSVMPVCVRKQGEADREWNTTGAGLARDVDHVVTAEVGKIFLERGIKLN
16 ELPESNFDNPIEGTGGALLFGTTGGVMEALRTVYEVVTQKPMGRVDFEEVRGLEGIKE
17 AEITLKPGGDSPFKAFAGADGGGITLKIANGVANGNNAKKLIKSLSEGKAKYDFIEVMACP
18 GGCIGGGGQPRSTDKQILQKRQQAMYNLDERSTIRRSHDNPFIQALYDKFLGAPNSHKAH
19 DLLHTHYVAGGIPEEK
20

1
2 (2) INFORMATION FOR SEQ. ID NO.7:
3 (i) SEQUENCE CHARACTERISTICS:
4 (A) LENGTH: 2636 BASE - #PAIRS
5 (B) TYPE: NUCLEIC ACID
6 (C) STRANDEDNESS: SINGLE
7 (D) TOPOLOGY: LINEAR
8 (ii) MOLECULE TYPE: MRNA
9 (xi) SEQUENCE DESCRIPTION: SEQ. ID NO.7
10
11
12 ACAACAGAGCGTTAGAGATACTTCATAGCTGCAACTAGACTACCTTTACCCTAACGAAAT
13 CACCCTAGACCGACAGTGTCTGGAGTAGCTGCGACCCAAACGTGATGGCGAGCGGATTGCT
14 TCTCAAGCAGCGCTCGGTATGCCTGAGTGGCAACCGGGAGGTCGGTATGCTGTTTCTGTC
15 CGCCCGCCAGTGAACAGGCGGGCTGTGGTGGCAGCAGAGCGCAGGCGCCTTGTTGTGCGG
16 GCAGCTGGCCCAACAGCAGAATGTGATTGCCCACCAGCTCCCGCGCCCAAGGCCCCGCAC
17 TGGCAGCAGACGCTAGATGAGCTAGCCAAGCCTAAGGAGCAGCGCAAGGTGATGATCGCC
18 CAGATCGCACCAGCAGTGC GCGTGGCTATTGCAGAGACCATGGGACTCAACCCTGGGGAT
19 GTGACAGTTGGCCAGATGGTGACCGGCCTGCGCATGCTGGGCTTTGATTATGTGTTTGAC
20 ACGCTGTTTGGTGCTGACCTCACCATCATGGAGGAGGGCACAGAGCTACTGCACAGGCTT
21 CAGGACCACCTGGAGCAGCACCCCAACAAGGAGGAGCGCTGCCCATGTTCAACAGCTGC
22 TGCCCTGGCTGGGTGGCCATGGTGGAGAAGTCCAACCCCGAGCTCATCCCCTACCTGTCT
23 TCCTGCAAGTCGCCCCAGATGATGCTGGGCGCAGTCATCAAGAACTACTTCGCTGCCGAG
24 GCCGGCGCCAAGCCTGAGGACATCTGCAACGTGAGCGTGATGCCCTGCGTGCGCAAGCAG
25 GGCGAGGCTGACCGCGAGTGGTTCAACACCACAGGGGCTGGCGGCGCGAACGTGGACCAC
26 GTCATGACAACTGCAGAGCTGGGCAAGATCTTTGTGGAGCGCGGAATCAAGCTGAACGAC
27 CTGCAGGAGACGCCCTTTGACAACCCCGTCGCGCAGGGCAGCGGCGGCGTACTGTTCCGGC
28 ACCACTGGAGGCGTGATGGAGGCGGCGCTGCGCACCGTGTACGAAGTGGTCACACAGAAG
29 CCTTTGGACCGCATCGTCTTTGAGGACGTGCGCGGCCTGGAGGGCATCAAGGAGTCCACG
30 CTGCACCTCACCCAGGCCCCACCAGCCCCCTCAAGGCCTTTGCAGGCGCAGACGGCACC
31 GGCATCACCCCTCAACATCGCGGTGCCAACGGCCTCGGCAATGCCAAGAAGCTCATCAAG
32 CAGCTGGCTGCAGGCGAGAGCAAGTACGACTTCATCGAGGTCATGGCCTGCCCCGGCGGC
33 TGCATCGGCGGCGGCGGCCAGCCGCGCAGCGCGGACAAGCAGATCCTGCAGAAGCGCCAG
34 GCGGCCATGTACGACCTGGACGAGCGCGCGGTGATCCGGCGCAGCCACGAGAACCCGCTG
35 ATTGGCGCGCTGTATGAGAAGTTCCTGGGCGAGCCCCAACGGCCACAAGGCGCACGAGCTG
36 CTGCACACGCACTACGTGGCCGGCGGCGTGCCCGATGAGAAGTGAAGCGGTGGCTGGTGA
37 TGCTGGCTGCGGCGAAGAAACGGTGGGCATGGTGGTGGGTGGGTGCTGCATGGTGGTGT
38 CGCTCGTGCAGCATGGTGGGTTTGC GGTGTGATGTTGGGCATGCTGCACGGAGGTGTTT

1 GCATGGTTATGGATATGGTTCAGGTGCTGTGCTGCGTCGCATGCCATAAGCACCTTGTGA
2 CCCTGTGCGATGCATAAAAAATAGATATTGCCATTTGGTTCCAGGCTGGTGGTGGCAGTGG
3 CTGGTTAACAGGGGAGTGTGTGTGTTTGTGTGTCTTCATTGTCGGTGTGTTCTTGCTGCA
4 TGTATTGTAGTGTAAATGGGTATGCACGCCTGCATGCGCACGCGCTCCTCGTGCTGCGAC
5 AGTGCACAACGCACAGCGTGATACAGCTGCAGGACGTTTGC GGAAAAACACTTGTTACTG
6 GTGACGGCTGAAGCAGCGATGATGGAGAGAATGGATTGCTGCTATCTCACAGGGCGTGG
7 CTGCTGCATCGCCATGGCATGTCCCTGTTGCACGCAATTGCCTGCGTAATTTTGATAGTG
8 GCAGCACTGAGGCAGCTGCAAGGCCTTCTGCCAGCGGCTGTTTGTGTCTATCTGTGTTT
9 ACAGGCAGCTGCATTTGAAGGCAAGGGGGTTGGCCATCACTCACTTTGATCACTCACTTT
10 GAAGCAGGCTTCCATCCATGTATTGGTCAACGCACTGAAGTTCTTTTTTTGTCAACCAGGC
11 AGCAGTATTGTGTGCACACTACTTGCTATGGAGATGACAGCAGCATCAATCTCAAGCATG
12 ATGAAAGCGTATGTTGTATCAGTGCCCCATTTTGCAGACTCTTAAGAGCTTTACCTTCTC
13 AGGGGTTGCAGCAGGTGGTGGTCAGCCAGTTGAGGGAGTGTGTGGCTGTTGTCTTGCCAC
14 CATGTGAGTATTGAAACCACCATCCTGAGCTAAGTGTTAGGCATCTTACCCTCATACCC
15 CGCTACCCTGCTACTGGGAGTTTCGTTTCATTGTATTGGCAGCCGTTTACTAATTAGTAA
16 TGGCGCTTGAGCGAGGCATGTCTTGATATGTATGCCTTAGGAGAGTGTGAGCTCAACTCA
17 ATTCTCATAAGTGTAAGCCACACAACCTGGAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
18

1
2 (2) INFORMATION FOR SEQ. ID NO.8:
3 (i) SEQUENCE CHARACTERISTICS:
4 (A) LENGTH: 2399 BASE - #PAIRS
5 (B) TYPE: NUCLEIC ACID
6 (C) STRANDEDNESS: SINGLE
7 (D) TOPOLOGY: LINEAR
8 (ii) MOLECULE TYPE: MRNA
9 (xi) SEQUENCE DESCRIPTION: SEQ. ID NO.7
10
11
12 ATCTTACATGAACACACAAACACTCTCGCAGGCACTAGCCTCAAACCCTCGAAACCTTTT
13 TCCAACAGTTTACACCCCAATTTCGGACGCCGCTCCAAGCTCGCTCCGTTGCTCCTTCATC
14 GCACCACCTATTATTTCTAATATCGTAGACGCGACAAGATGTCGGCGCTCGTGCTGAAGC
15 CCTGCGCGGCCGTGTCTATTCGCGGCAGCTCCTGCAGGGCGCGGCAGGTCGCCCCCGCG
16 CTCCGCTCGCAGCCAGCACCGTGCCTGTAGCCCTTGCAACACTTGAGGCGCCCGCACGCC
17 GCCTAGGCAACGTCGCTTGCGCGGCTGCCGCACCCGCTGCGGAGGCGCCTTTGAGTCATG
18 TCCAGCAGGCGCTCGCCGAGCTTGCCAAGCCCCAAGGACGACCCACGCGCAAGCACGTCT
19 GCGTGACGCTGGCTCCGGCCGTTTCGTGTGCTATTGCCGAGACCCTGGGCCTGGCGCCGG
20 GCGCCACCACCCCAAGCAGCTGGCCGAGGGCCTCCGCCGCTCGGCTTTGACGAGGTGT
21 TTGACACGCTGTTTGCGCGCCGACCTGACCATCATGGAGGAGGGCAGCGAGCTGCTGCACC
22 GCCTACCGAGCACCTGGAGGCCCCACCCGCACTCCGACGAGCCGCTGCCCATGTTACCA
23 GCTGCTGCCCCGGCTGGATCGCTATGCTGGAGAAATCTTACCCGGACCTGATCCCCTACG
24 TGAGCAGCTGCAAGAGCCCCAGATGATGCTGGCGGCCATGGTCAAGTCTACCTAGCGG
25 AAAAGAAGGGCATCGCGCCAAAGGACATGGTCATGGTGTCCATCATGCCCTGCACGCGCA
26 AGCAGTCGGAGGCTGACCGCGACTGGTTCTGTGTGGACGCCGACCCACCCCTGCGCCAGC
27 TGGACCACGTCATCACCACCGTGGAGCTGGGCAACATCTTCAAGGAGCGCGGCATCAACC
28 TGGCCGAGCTGCCCCGAGGGCGAGTGGGACAATCCAATGGGCGTGGGCTCGGGCGCCGGCG
29 TGCTGTTTCGGCACCAACGGCGGTGTCTATGGAGGCGGCGCTGCGCACGGCCTATGAGCTGT
30 TCACGGGCACGCCGCTGCCGCGCCTGAGCCTGAGCGAGGTGCGCGGCATGGACGGCATCA
31 AGGAGACCAACATCACCATGGTGCCCGCGCCCGGTCCAAGTTTGAGGAGCTGCTGAAGC
32 ACCGCGCCGCGCGCGCGCGCGAGGCCGCGCGCACGGCACCCCGGGCCGCTGGCCTGGG
33 ACGGCGGCGCGGGCTTACCAGCGAGGACGGCAGGGGCGGCATCACACTGCGCGTGGCCG
34 TGGCCAACGGGCTGGGCAACGCCAAGAAGCTGATCACCAGATGCAGGCCGGCGAGGCCA
35 AGTACGACTTTGTGGAGATCATGGCCTGCCCCGCGGGCTGTGTGGGCGGCGGCGGCCAGC
36 CCCGCTCCACCGACAAGGCCATCACGCAGAAGCGGCAGGCGGCGCTGTACAACCTGGACG
37 AGAAGTCCACGCTGCGCCGCGAGCCACGAGAACCCGTCCATCCGCGAGCTGTACGACACGT
38 ACCTCGGAGAGCCGCTGGGCCACAAGGCGCACGAGCTGCTGCACACCCACTACGTGGCCG

1 GCGGCGTGGAGGAGAAGGACGAGAAGAAGTGAGGAGCGCCAGAGGCTCTTTGGGCGGAGA
2 CAGCTTCAAAGCGAGGGGGCGTATTAGCAGTACCGTAAATATGCACTGATGGGTGATGCG
3 GGTGTCCTCCTTTATATTGAATGGGGTCAAAATAGGCGGCGGGTCAAATGTTTCCTTTTT
4 GAGTGGTGTACAGCATGGGGCACGTGTGCGGAGGCCAGTAGGCTGTTCACTGCACGCTG
5 GCATTAGGCGTAGGTACTGGCATGAGGGAGCGCGGCTTGCTAACCGAATGGCGTATCCCT
6 CCAGGGCACGTGCGAATGGCGCGTGCCCATCAACGCAAATTCCTTGGCCTTCATCGCTTCT
7 GGATATTGAAGCTGCACAAACCTGCATTCTATTTGCTTGTTTACACGTGCCCCAATCTTG
8 GTTGAAGCTAAACATGTTTGGGAACAATTCATCTTACTAAAGCGTGTGGGGGTGAGGA
9 TGCGCACGTTGTGCGCTGGTGGGTGGGCGGGAACGTGGGTAGCATTTAGGCTAGCTGGCA
10 TACGACAACGGGGCCCGTGAGGATTGAGCACTTGACTCGCGAACTTATGAACGTAGCGCT
11 TTATACCCACCGTATGCGATTGACGTTGGTGTAGGCAACCAGGCGGTAGGAAGGCGGAGA
12 GATGCATTGCAAACGCCTGTAAAAGAACGGCATAGCTACTAGACACTCTGATGTGGACCC
13 TTGGCGCAGCCACGACAGGAGAGGTGTGCATCAGCCGCTTGTAAGCACGCACTTCTGAG
14

1
2 (2) INFORMATION FOR SEQ. ID NO.9:
3 (i) SEQUENCE CHARACTERISTICS:
4 (A) LENGTH: 2421 BASE - #PAIRS
5 (B) TYPE: NUCLEIC ACID
6 (C) STRANDEDNESS: SINGLE
7 (D) TOPOLOGY: LINEAR
8 (ii) MOLECULE TYPE: MRNA
9 (xi) SEQUENCE DESCRIPTION: SEQ. ID NO.9
10
11
12 GCGGAATTACTAGTGATAAGCAGTGGTAACAACGCAGAGTCGCGGGCAGGGACTCGATCA
13 GTTGTATGTGTTGCCCCGTGGTTGCAAGTAGGCACGCAGGGCGTGCAAGGCATGTTGCT
14 GTCCGTGCAGCAGGGCCAACATCTGAGTGTGATTGTCTCCAACACCTCAGGCCAAGCTG
15 CCTCACTGGCAGCAGGCTCTGGATGAGCTCGCCAAGCCCAAGGAGAGCAGGAGGTTGATG
16 ATCGCGCAAATCGCCTCCGCTGTTCGTGTCGCTATTGCTGAGACCATTGGCTTGGCCCCA
17 GGAGATGTCACCATTGGGCAGCTCGTGACTGGGCTGCGTATGCTTGGCTTTGATTATGTC
18 TTTGACACCCTGTTTGGTGCTGACCTGACCATTATGGAGGAGGGAACGGAGCTGCTGCAT
19 CGCCTGCAGGACCATCTGGAGCAGCACCCCAACAAGGAGGAGCCACTGCCCATGTTACCC
20 AGTTGCTGCCCAGGCTGGGTTGCCATGGTTGAAAAGAGCAATCCTGAGCTCATCCCCTAC
21 CTGTCATCTTGCAAGTCGCCTCAGATGATGCTTGGGGCCGTTATCAAGAACTACTATGCA
22 CAGCAGGTTGGAGTGCAGCCCAGTGACATCTGCAACGTGTCAGTCATGCCATGCGTACGC
23 AAGCAGGGAGAGGCTGACCGGGAGTGGTTCACACCACAGGTGCAGGCCTTGCCCGTGAT
24 GTTGATCATGTGGTGACTACTGCTGAGGTTGGTAAGATATTCCTGGAGCGTGGCATCAAG
25 CTGAATGAGCTGCCAGAGAGCAACTTTGACAACCCCATTGCGGAGGGCACAGGTGGTGCT
26 CTGCTGTTTGGCACCCTGGAGGTGTCATGGAGGCAGCACTTCGCACAGTCTATGAAGTG
27 GTGACCCAGAAGCCCATGGGTCGTGTTGACTTTGAGGAGGTGCGAGGCCTTGAAGGAATC
28 AAGGAGGCAGAGATCACACTCAAGCCAGGAGACGACAGCCCATTCAAAGCCTTCGCAGGA
29 GCTGATGGGCAGGGCATCACGCTCAAGATTGCAGTAGCCAATGGGCTTGGCAATGCCAAG
30 AAGCTCATCAAGAGCCTGTGAGAGGGCAAGGCCAAGTATGATTTTCATTGAGGTCATGGCA
31 TGCCCTGGTGGCTGCATTGGCGGAGGCGGTGAGCCCCGAGTACTGACAAGCAGATCCTG
32 CAGAAGCGCCAGCAGGCTATGTACAACCTGGATGAGCGCAGTACCATCCGCCGCAGCCAT
33 GATAACCCATTTCATCCAGGCGCTGTATGACAAGTTCCTAGGCGCACCCAAACAGCCACAAG
34 GCACATGATCTGCTGCACACACACTATGTGGCAGGTGGAATTCAGAGGAGAAGTGAGGG
35 ACCGAGGCCCGAGTGGTGTTATTAGTGTAGAGCTAGGCAGCAGGGATCTGGCCGCATTTG
36 GGTGCTGTTGTTTGGTTTGGCATCAAAGATATGATGAATGTACAATCTATTGGGTTCTTT
37 GTATCTCATTCATGACTGCTGCTTGGTGAGGTATGGGCCAGGAAGAAGCCCGCATCAATG
38 CATGTGAACTAGGTGGCTCCACATATGAACCCTATCTGGATGTTTAAGGTACCTGAAACA

1 ATAGTGCATCGGCTCTGCATGGCTCAACAACCTGTCTTCAGAGCAGGTGTATTCCACACC
2 ATCTTGATTTACCTACCACTCTGTAGTTCAAGTGGTCAAATTGAATGTCTATGGCAGCTA
3 CGCCTGCAGTTCATAGTCTATGAAGGTTTCACCAGAGTCCATGTCCCTCATATTTTTTGT
4 TTTATATGCCTTGATTATGCCCCTTGAACCATGCTCAATGCACACAAGTTGGTCGCAGGA
5 CAGGCGGCATCGTACATCTCAATTTTCAGAACTTGTCAAGTGCAGGCTGCCTTATTTGTA
6 CTCTTGCAAGTCTGTTTCACCCCTTGCTACTGCCTTGCAATGCATCTTGTGTTTTCAGCAA
7 CAGCTCATGCATTGCAATCGATCATCACGTACATCCGTGCCATATTCACATGGTTTTGAC
8 TTGCAAATCAACCACCAGGCAGTGGGTAAATTGCCAGGCTGGGTGCACCTTTGGGCCATTT
9 GGGCAGCCCTCTTGTGGCGAGCTTTGCTGCAGGGCCAAGCTGAGTGCATCAGACTCAGCA
10 GGCTGCTGCTGGCACTGTAGAATGCTGAAAAGGGCATTCAACTACATGTCATTATTAGGT
11 TGACCTGAGACAGCCGTAAGAATATCATTGTGTGCTGAACTTAGTCGTCAATGTCATGCC
12 ATGATGTGTGTTTCAGGGATGGATAAGGGAGGTCTTCCTCAATTACATGCCTTTCAAGA
13 GACTTCAATATCTGTTGTCAGTGACTTGTGTTGCTTAATCCAGTGGTTCTCAAAA
14 AAAAAAAAAAAAAAAAAAAAAA
15